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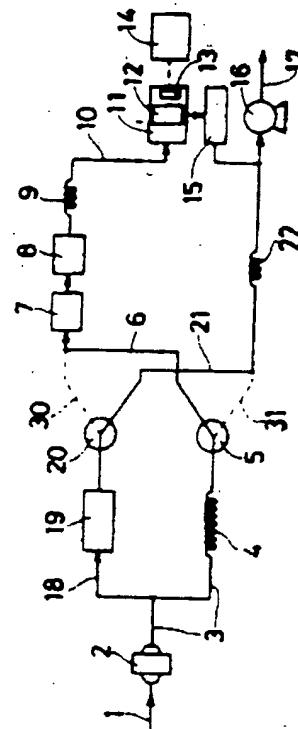
APPLICATION DATE : 14-11-81
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TITLE : CONCENTRATION MEASUREMENT
 FOR NITROGEN COMPOUND IN GAS



ABSTRACT : PURPOSE: To measure continuously the ammoniacal nitrogen concentration and the non-ammoniacal nitrogen concentration in a specimen gas by using a device that incorporates a device to remove selectively ammonical nitrogen compounds and conducting alternately the measurement of total nitrogen compounds and the measurement of non-ammoniacal nitrogen compounds.

CONSTITUTION: A specimen gas (the atmosphere, exhaust gas, etc.) is stored in a storing means 3 from a pipe 1 via a dust collector 2. The gas is then led to a converter 7 through a valve 5 and pipe 6, and there the ammonical nitrogen and non-ammonical nitrogen in the specimen gas are heated over 600°C and changed into NO. NO is dehumidified by a dehumidifier 8 and reacted with O₃ through a pressure regulating capillary 9 to luminate in a luminescent cell 12 in a detection device. This is detected by a detector 13 and total nitrogen is sought. Next, the valve 5 is changed over and the specimen gas is removed from the pipe 18 by an ammonical nitrogen adsorption removal device 19 (cation exchange resin is filled), and non-ammoniacal nitrogen through a valve 20, converter 7 and dehumidifier 8 is detected by a detector 13. The ammonical nitrogen is given by the difference of total nitrogen analysis results and recorded.

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